

REMARKS

Claims 1 to 10 and new claims 11 and 12 are pending. The amendments and new claims are supported in the published application as follows: claim 4: ([0069]); new claim 11: ([0041]); and new claim 12: ([0039]). No new matter has been added.

Claim 4 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. (Office Action p. 2)

Claim 4 has been amended for clarity based on the support in paragraph [0069] in the published application.

Claims 1, 3, and 6-10 are rejected under 35 U.S.C. 102(a) as being anticipated by Doi et al. (JP 2004/091590 A). (Office Action p. 3)

Doi was published on March 25, 2004. The present application is a national phase application of PCT/JP2004/011195, which claims priority on Japanese Patent application No. 2003-204620 dated July 31, 2003. The Applicants submit herewith a verified translation JP2003-204620, thereby perfecting their priority to July 31, 2003. As a result, the Doi is removed as a reference and the rejection is moot.

Claim 5 is rejected under 35 U.S.C. 102(a) as anticipated by or, in the alternative under 35 U.S.C. 103(a) as obvious over Doi et al. (JP 2004/091590 A). (Office Action p. 5)

As mentioned above, the Applicants submit herewith a verified translation JP2003-204620, thereby perfecting their priority to July 31, 2003. As a result, the Doi is removed as a reference and the rejection is moot.

Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Doi et al. (JP 2004/091590 A). (Office Action p. 6)

For this rejection as well, the Applicants submit herewith a verified translation JP2003-

204620, antedating Doi. As a result, the Doi is removed as a reference and the rejection is moot.

Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Doi et al. (JP 2004/091590 A) in view of Kuribayashi et al. (US 2004/0009294). (Office Action p. 7)

As mentioned above, the Applicants submit herewith a translation of this application's priority document, thereby perfecting their priority to July 31, 2003. As a result the Doi is removed as a reference. Kuribayashi is also removed as a reference, as its publication date is January 15, 2004. Thus the rejection based on the combination of Doi and Kuribayashi is moot.

Even though the references have been removed as prior art, it is respectfully requested that the Examiner consider the following comments which clarify at least some of the differences between the claimed invention and the cited art.

The rejection alleges that Doi et al. "teaches a method of producing a water-based pigment dispersion for inkjet ink, comprising kneading and dispersing a mixture containing a styrene-acrylic acid-methacrylic acid copolymeric resin having 70 wt% styrene monomer and an acid value of 151 and M_w of 7,000, C.I. Pigment Red 122 (a quinacridone pigment), phthalimidomethylated 3, 10-dichloroquinacridone, potassium hydroxide and diethylene glycol (a humectant)."

The invention provides in claim 1:

a method of producing a water-based pigment dispersion for ink-jet ink, which includes a kneading process for kneading a mixture containing a styrene-based resin, a quinacridone-based pigment, a phthalimidomethylated quinacridone-based compound, an alkali metal hydroxide and a humectant to produce a colored kneaded solid mixture, and a dispersing process for dispersing the colored kneaded sold mixture in an aqueous medium.

By using the kneading process for producing the colored kneaded solid mixture, "in the kneading step, dispersibility is enhanced by the alkali metal hydroxide neutralizing carboxyl groups in the styrene-based resin and also the resin is swollen by the humectant thereby to soften the surface to form a mass made of a mixture together with the quinacridone-based pigment" (paragraph No. [0054]). As a result, "since the mixture is solid at normal temperature but is remarkably viscous at the kneading temperature of 50 to 90°C, a large shear force can be applied

to the mixture during kneading and the quinacridone-based pigment is crushed into fine particles, while the surface of the fine particles are coated with the styrene-based resin” (paragraph No. [0054]).

On the contrary, in the production method of Doi et al., a resin solution is prepared in advance, and then a pigment, a humectant and water are added to the resin solution to prepare a mixture. And the mixture is stirred by a paint shaker to obtain a water-based pigment dispersion. That is, **the production method of Doi et al. does not have a process in which a kneaded solid mixture is prepared, and in particular the kneading process of the present invention in which a large shear force can be applied to a mass made of the mixture used for a raw material.**

The effects of the existence of the above kneading process on a water-based pigment dispersion or an ink composition have been already reviewed in the present invention and are empirically shown in Example 2 in table 3 and Comparative Example 2 in table 6. There is a significant difference in the dispersion stability of the ink composition.

The ink composition of Comparative Example 2 in the present invention is produced by the method similar to the production method of Doi et al. However, the production method of Doi et al. is different with the Comparative Example 2 in the present invention in that in Doi et al., inorganic fine particles are added, a filtration process is conducted after ink blending, and the combination of the ink itself having a significant effect on the stability of the ink composition is different in that, for example the existence of a surfactant (a surfactant is not used in Doi et al.). It appears that the filtration process after ink blending and no use of the surfactant works positively to obtain a good stability of ink composition in Doi et al., although Doi et al. does not have the kneading process.

Comparing Example 2 and Comparative Example 2 of the present invention as above, the existence of the kneading process is very important in producing the water-based pigment dispersion or ink composition by using the styrene-based resin, the quinacridone-based pigment, the phthalimidomethylated quinacridone-based compound of the present invention, and it is clear that the kneading process improves the stability of the water-based pigment dispersion or ink composition remarkably. The effect of the claimed invention would not be expected from the prior art.

Kuribayashi relates to an aqueous dispersion containing pigment-containing particles. However, Kuribayashi cannot compensate for the lack of disclosure in Doi as described above. Therefore even combination of references cannot make a *prima facie* rejection of obviousness.

With both Doi and Kuribayashi removed as references and even their combination not disclosing or even suggesting the claimed invention, the rejection fails. It is respectfully requested that this rejection be withdrawn as well.

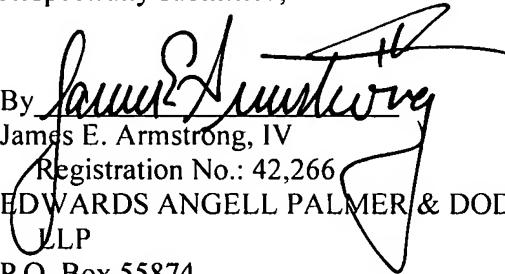
In view of the above amendment, applicant believes the pending application is in condition for allowance.

The Director is hereby authorized to charge any deficiency in the fees filed, asserted to be filed or which should have been filed herewith (or with any paper hereafter filed in this application by this firm) to our Deposit Account No. 04-1105.

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Respectfully submitted,

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Encls: Verified Translation of JP2003-204620 (69 pages)